

**Danish Water Forum, Water research conference, 2025. Overview of technical presentations and sessions.**

## **EU Invests in Water Innovation – discussions around the forthcoming EIT Water, Marine & Maritime Knowledge Innovation Community (KIC)**

As part of Horizon Europe, EU's main program for Research and Innovation, the EIT is set to create a new Knowledge and Innovation Community (KIC) in the field of water, marine and maritime sectors and ecosystems. KIC will unite water, marine, and maritime innovators to join the EIT Community and build a pan-European partnership that addresses the most pressing challenges facing water-related innovation ecosystems.

Denmark plans to have a central role in the forthcoming EIT Water KIC and we are inviting you to join this workshop to learn more about the EIT Water KIC call and give your input to the forthcoming application.

Learn more about the EIT Water here: <https://eit.europa.eu/our-activities/call-for-eit-communities/eit-water>

Hosted by Water Valley Denmark; contact: Janni Thusgaard - [jth@watervalleydenmark.com](mailto:jth@watervalleydenmark.com)

## **Groundwater and water supply**

Impact of natural electric fields on ion transport in groundwater; **Perrine Marguerite Fernandez, Aarhus University**

Groundwater Recharge Estimation from Multiple Independent Methods in Fractured Hard-Rock Aquifers in Densu Basin Ghana; **Bismark Awimbire Akurugu, Water Research Center Ghana**

Innovative UV Reactor for Complete Degradation and Defluorination of PFAS without Additives in Water Treatment; **Shuang Luo, Aarhus University**

High-resolution hydraulic conductivity estimates from borehole nuclear magnetic resonance (NMR); **Seyyed Reza Mashhadi, Aarhus University**

Assessing the needed supply buffer for Copenhagen's water supply; **Martin Rygaard, HOFOR**

Public online updatable hydrostratigraphic geological model used for groundwater administration in Denmark – a road trip and lessons learned; **Tom Martlev Pallesen, I-GIS**

Robust and automatic validation of sensor data from combined drainage networks; **Rocco Palmitessa, DHI A/S**

Implementing an IoT sensor network in a horizontal subsurface flow constructed wetland pilot for real-time monitoring of hydraulic patterns; **Christian Overlund, DTU**

## Biofilm and corrosion

Biofilms on RO membranes used in water recycling harbor diverse bacteria with opposing salinity optima; **Jan Struckmann Poulsen**, Aarhus University

Effects of salinity oscillation on planktonic bacteria and biofilm formation; **Arya Van Alin**, Aarhus University

Induction Time Investigations for Assessing Scaling Risk in Feedwaters of Reverse Osmosis Systems using Batch Operation; **Loren Mark Ramsay**, Via University College

Using conductivity as a surrogate to enable real-time monitoring of chloride concentration to support stormwater quality control during winter; **Lineker Goulart Coelho**, DTU

A screening framework for the selection of areas to implement multipurpose urban constructed wetlands for the production of biobased construction materials; **Kemo Usto**, DTU

Bayesian spatial modeling of extreme rainfall frequency in Denmark using INLA and SPDE methods; **Nafsika Antoniadou**, DTU Sustain

Comparison of heavy metal and nutrient removal in wet- and dry ponds treating urban runoff; **Emil Jespersen**, Aarhus University

## Recovery of resources

Source tracking and simulation of the fate of hazardous substances in Odense Fjord; **Jens Tørslev**, DHI A/S

Hazardous substances, sources and compliance. Co-creation of a digital support tool; **Marie S.R. Vestergaard**, DHI A/S

Decentralized PFAS Removal at Drinking Water Wells Using Resin Filters; **Nicolaj Schmidt Damgaard**, Teknologisk

A UV/Phenol/DTN System for Simultaneous PFAS and Phenol Remediation; **Xingaoyuan Xiong**, Aarhus University

LPRO membrane filtration for removal of PFAS, DMS and other groundwater micropollutants from mineral-rich drinking water - a pilot study; **Sonsoles Quinzanos**, HOFOR

Closing the PFAS cycle: Regeneration and novel defluorination strategy for PFAS adsorbents; **Jan-Max Arana Juve**, NIRAS

Optimizing Dewatering process for Sludge Management and PFAS Removal in Wastewater Treatment; **Jakob Nielsen**, Teknologisk

Reactive ZVI-biochar for chlorinated ethylene remediation in groundwater aquifers; **Jinxin Zhao**, University of Copenhagen

## Wastewater treatment

Percrystallization: A versatile Approach for Desalination and Zero Liquid Discharge; **Bastian Stiem Kirkebæk, Ålborg University**

Membrane distillation for the treatment of industrial wastewater: Experimental and modelling perspectives; **Hussein Fairousha Sulaiman, Ålborg University**

Cutting Emissions with Digital Precision: The Future of Wastewater Treatment Plants; **Trine Dalkvist, DHI A/S**

Integration of hydrothermal liquefaction in wastewater treatment: focus on treatment of the process water; **Sanne Falkenberg Jensen, Aarhus University**

Using nanobubble aeration to enhance (urban) wastewater treatment in constructed wetlands; **Sara Bedoya, Aarhus University**

Denmark's Africa Strategy Promotes Strategic Cooperation and Investment Opportunities in Ghana; **Mathias Thuborg Madsen, Min. Foreign Affairs**

## POSTERS

Sustainable Water Quality Improvement Through Constructed Floating Wetlands: Potential of South American Macrophytes for Eutrophication and Cyanobacteria Management; **Allan Amorim Santos, Brazil**

Performance Assessment of Hydrocyclone System for Aquatic Microplastics Removal Using Online Microscopy Sensors; **Zhenyu Yang, Ålborg University**

A secured and surge-free water supply system in Kalundborg; **Wei Han, Rambøll**

Semicentennial trend analysis of irrigation and food variables reveal global disparities among countries and regions; **Kiril Manevski, Aarhus University**

Operating experiences from the first year with solar cells placed over a green sedum roof; **Niels Eisum, Huginn**

Assessing Diatom Diversity: Evaluating Artificial Substrates as Proxies for Natural Biofilm Communities of Water Leaching from a HCH Deposit; **Josephine S. Jensen, Aarhus University**

Ultrapure- and Reject Water Treatment for Power-to-X Applications – A Technical Deep Dive; **Sebastian Ravn-Andersen, NIRAS**

Surface and Morphology Modulated Adsorption-Activation of Trace Concentration Hydrogen Peroxide with Multiple Electron Transfer Pathways and Sustained Fenton Reactions; **Zhiqun Xie, Aarhus University**